



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1133G-JM      BYPASS RATIO: 11.4  
 UNIQUE ID NUMBER: 15PW108      PRESSURE RATIO ( $\pi_{00}$ ): 38.9  
 COMBUSTOR: TALON X  
 ENGINE TYPE: TF      RATED THRUST ( $F_{00}$ ) (kN): 147.3

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.2	25.2	38.3	5.7
AS % OF ORIGINAL LIMIT	1.0	21.4	32.5	26.8
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			40.7	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			45.2	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			50.0	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			56.5	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	1.023	0.03	0.14	25.23	4.4
CLIMB OUT	85	2.2	0.839	0.03	0.20	18.92	2.0
APPROACH	30	4.0	0.278	0.04	3.59	9.14	0.3
IDLE	7	26.0	0.099	0.05	17.89	6.98	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			375	16	3025	4864	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.1	20.5	33.0	4.4
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.6-101.7
TEMPERATURE (K)	265.6-278.2
ABS HUMIDITY (kg/kg)	0.00071-0.00203

### FUEL

SPEC	Jet A
H/C	1.86
AROM (%)	15.1-16.6

MANUFACTURER: Pratt & Whitney  
 TEST ORGANIZATION: Pratt & Whitney  
 TEST LOCATION: X8 Test Stand, East Hartford, CT  
 TEST DATES: 11/03/2014-14/03/2014

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

- Data from Certification Report PWA-9968
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)